

CLAIMS

1. A method of providing location services (LCS), comprising:
performing location determination via a first set of at least one network entity to obtain location information for a mobile station; and
performing location disclosure via a second set of at least one network entity to provide the location information for the mobile station.
2. The method of claim 1, further comprising:
performing authentication and authorization for location determination based on a first security procedure; and
performing authentication and authorization for location disclosure based on a second security procedure.
3. The method of claim 2, wherein the first security procedure is based on an MD-5 algorithm and the second security procedure is based on an Authentication and Key Agreement (AKA) procedure.
4. The method of claim 1, further comprising:
performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with the first set of at least one network entity; and
performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with the second set of at least one network entity.
5. The method of claim 1, wherein the location determination and the location disclosure are performed in two separate LCS sessions.
6. The method of claim 1, further comprising:
caching the location information for the mobile station, and wherein the location disclosure is performed using the cached location information for the mobile station.

7. The method of claim 1, wherein the first set of at least one network entity is located in a serving network for the mobile station and the second set of at least one network entity is located in a home network for the mobile station.

8. The method of claim 1, wherein the location disclosure is performed by a location client and a location server.

9. The method of claim 8, wherein the second set of at least one network entity includes an LCS provider, and wherein the location client is located in the mobile station or the LCS provider.

10. The method of claim 8, wherein the second set of at least one network entity includes an LCS server, and wherein the location server is located in the mobile station or the LCS server.

11. The method of claim 1, wherein the first set of at least one network entity includes a position determining entity (PDE).

12. The method of claim 11, wherein the first set of at least one network entity further includes a serving mobile positioning center (SMPC).

13. The method of claim 11, wherein the first set of at least one network entity further includes a home authentication, authorization, and accounting entity (H-AAA).

14. The method of claim 1, wherein the second set of at least one network entity includes an LCS server.

15. The method of claim 14, wherein the second set of at least one network entity further includes a home authentication, authorization, and accounting (H-AAA) entity.

16. The method of claim 1, wherein the location information for the mobile station comprises a location estimate for the mobile station.

17. The method of claim 1, wherein the location information for the mobile station further comprises an uncertainty for the location estimate for the mobile station.

18. A apparatus comprising:

means for performing location determination via a first set of at least one network entity to obtain location information for a mobile station; and

means for performing location disclosure via a second set of at least one network entity to provide the location information for the mobile station.

19. The apparatus of claim 18, further comprising:

means for performing authentication and authorization for location determination based on a first security procedure; and

means for performing authentication and authorization for location disclosure based on a second security procedure.

20. The apparatus of claim 18, further comprising:

means for performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with the first set of at least one network entity; and

means for performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with the second set of at least one network entity.

21. The apparatus of claim 18, further comprising:

caching the location information for the mobile station, and wherein the location disclosure is performed using the cached location information for the mobile station.

22. A wireless mobile station comprising:

a processor operative to perform a first function to obtain location information for the mobile station and to perform a second function to provide the location

information, wherein the first function interacts with at least one peer first function located in a first set of at least one network entity to obtain the location information, and wherein the second function interacts with at least one peer second function located in a second set of at least one network entity to provide the location information.

23. A program product embodied on a tangible storage medium, the program comprising executable instructions to:

perform a first function to obtain location information for the mobile station, wherein the first function interacts with at least one peer first function located in a first set of at least one network entity to obtain the location information; and

perform a second function to provide the location information, wherein the second function interacts with at least one peer second function located in a second set of at least one network entity to provide the location information.

24. A method of providing location services (LCS), comprising:

performing location determination via a first LCS session to obtain location information for a mobile station; and

performing location disclosure via a second LCS session to provide the location information for the mobile station.

25. The method of claim 24, wherein the first and second LCS sessions are performed at different times.

26. The method of claim 24, further comprising:

performing authentication and authorization for the first LCS session based on a first security procedure; and

performing authentication and authorization for the second LCS session based on a second security procedure.

27. The method of claim 24, further comprising:

performing a first session key setup to obtain a first session key for use in the first LCS session; and

performing a second session key setup to obtain a second session key for use in the second LCS session.

28. The method of claim 24, further comprising:
providing a first call detail record (CDR) for the first LCS session; and
providing a second CDR for the second LCS session.

29. A apparatus comprising:
means for performing location determination via a first LCS session to obtain location information for a mobile station; and
means for performing location disclosure via a second LCS session to provide the location information for the mobile station.

30. A method of providing location services (LCS), comprising:
obtaining location information for a mobile station;
providing the location information to a first application; and
providing the location information to a second application.

31. The method of claim 30, wherein the location information is obtained by performing location determination once via one location determination session, and wherein the location information is provided to the first and second applications by performing location disclosure twice via two location disclosure sessions.

32. The method of claim 30, further comprising:
caching the location information in the mobile station or a network entity.

33. The method of claim 30, further comprising:
providing a first call detail record (CDR) for providing the location information to the first application; and
providing a second CDR for providing the location information to the second application.

34. The method of claim 30, wherein the first application is located in a first network and the second application is located in a second network.

35. A apparatus comprising:

means for obtaining location information for a mobile station;

means for providing the location information to a first application; and

means for providing the location information to a second application.

36. A method of providing location services (LCS), comprising:

performing location determination via at least one network entity in a serving network to obtain location information for a mobile station; and

performing location disclosure via at least one network entity in a home network to provide the location information for the mobile station.

37. The method of claim 36, further comprising:

performing a first session key setup to obtain a first session key, wherein the first session key is used for authentication and encryption of messages exchanged with the at least one network entity in the serving network; and

performing a second session key setup to obtain a second session key, wherein the second session key is used for authentication and encryption of messages exchanged with the at least one network entity in the home network.

38. The method of claim 36, wherein the at least one network entity in the serving network includes a serving mobile positioning center (SMPC), the method further comprising:

determining an Internet Protocol (IP) address of the SMPC.

39. The method of claim 38, wherein the IP address of the SMPC is determined using a fully qualified domain name for the SMPC.

40. The method of claim 38, wherein the location disclosure is performed via the SMPC.

41. The method of claim 36, further comprising:
sending a message to the mobile station to trigger the mobile station to initiate a LCS session for performing location determination.

42. The method of claim 36, further comprising:
caching the location information in the mobile station, a network entity in the serving network, a network entity in the home network, or a combination thereof.

43. A apparatus comprising:
means for performing location determination via at least one network entity in a serving network to obtain location information for a mobile station; and
means for performing location disclosure via at least one network entity in a home network to provide the location information for the mobile station.